

## CSA-CP - ZERO CALIBRATION OF UNITS AND COMPARISON OF VALUES

### NOTE

The function of the zero calibration filter is to remove all of the target gases (if present) in the air stream so that the sensors can be re-zeroed. The capacity to remove the target gases is severely reduced if the tethered filter caps are not immediately replaced and tightened after use.

1. Retrieve CSA-CP (one) from sampling location.
  - Kit  
2. Unstow  
    CSA-CP (one)  
    Sampling Pump  
    Zero Filter
  3. Loosen Velcro straps on Pump.
  4. Slide a CSA-CP into Pump bracket as far forward (toward inlet) as possible (CSA-CP oriented with display visible when facing the front panel of the Pump).
  5. Tighten Velcro straps.
  6. If CSA-CP is activated, continue next step.  
    |  
    If CSA-CP not activated, perform ACTIVATION, all (SODF: CHeCS), then:
  7. Remove the Pump Inlet Filter.  
    Temporary stow.
  8. Unscrew tethered end caps on the Zero Filter.
- ### NOTE

The Pump inlet fitting has outside and inside threads.
9. Screw end of the zero filter into the pump inlet fitting with arrow on filter pointing toward the pump until snug.
  10. Activate the Pump.
  11. After 2 minutes, press MODE push button until 'GO CAL' is displayed at the top.
  12. Press "E" button immediately.  
    √'SET SPAN' is displayed at the top

13. Press “+” button.  
√‘ZERO’ is displayed at the top

NOTE

The sensors will automatically re-zero in approximately 15 seconds.

14. Press “E” button.  
√‘ZEROING’ is displayed at top

NOTE

The sensor configuration will be displayed. After approximately 10 seconds the gas concentrations (nominal monitoring display) are displayed.

15. After ‘ZERO’ is displayed at top, press MODE push button once.
16. Deactivate the Pump.
17. Remove CSA-CP from Pump.  
Temporary stow CSA-CP.
18. Slide second CSA-CP into pump bracket and tighten straps, as done with previous unit.
19. If second CSA-CP is activated, continue to next step.  
|  
If second CSA-CP not activated, perform ACTIVATION, all (SODF: CHeCS), then:
20. Activate the Pump.
21. Following re-zeroing steps 11 --- 16.
22. Remove CSA-CP from Pump.
23. Remove Zero Filter from pump inlet.  
Replace tethered end-caps and tighten to finger tight.
24. Stow Zero Filter and Pump in Kit.
25. Retrieve both CSA-CPs.
26. Compare readings from the two units.  
Verify comparable values to the following  
CO:  $\pm 5$  ppm  
HCN:  $\pm 0.6$  ppm  
HCl:  $\pm 0.6$  ppm

27. Verify Batt charge full on both units.

NOTE

Full charge status on the display is indicated by 8 tick marks on asterisk.

- Kit
28. Deactivate, stow one CSA-CP.
  29. Redeploy second CSA-CP.